

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS(S): Gunma et al.  
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TITLE: Method of Forming Patterns on Articles

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

REQUEST FOR CORRECTED FILING RECEIPT

Sir:

Please correct the title for this application as follows:

Method of Forming Patterns on Articles

Attached are copies of the first page of the Application showing the correct title and the official Filing Receipt for this application.

Respectfully submitted,

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12/10/2003  
Date

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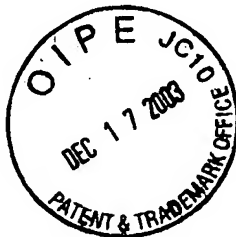


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10/606,381	06/24/2003	1742	1258	884A.0006.U1(US)	2	41	3

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CONFIRMATION NO. 4723  
UPDATED FILING RECEIPT



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Date Mailed: 11/14/2003

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Applicant(s)

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Assignment For Published Patent Application

NOKIA CORPORATION;

Domestic Priority data as claimed by applicant

Foreign Applications

If Required, Foreign Filing License Granted: 09/16/2003

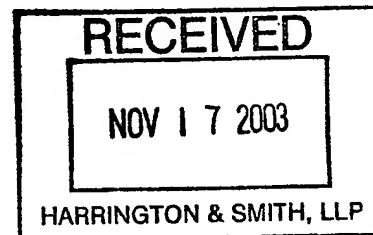
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Title

Method of forming patterns on articles



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## A Method of Forming Patterns on Articles

5 This invention relates to methods of forming patterns on articles. The invention also relates to articles having patterns thereon. More particularly, but not exclusively, the invention relates to mobile phone housings having electrical connector patterns thereon, and to methods of forming electrical connector patterns on mobile phone housings.

10 In the mobile phone industry, the density of components in the housing is increasing, in view of the demand to make the products smaller. There are also demands to increase the functions of mobile phones, for example by providing them with a camera facility and for the capabilities for input devices.

15 In order to mitigate these problems, metallic line patterns have been formed on the housing of the mobile phone to accommodate the electronic components thereon. However, the formation of such line patterns economically and using mass producible methods has been difficult.

20 According to one aspect of this invention there is provided a method of forming a pattern on an article comprising applying a carrier material to a seeding substrate to provide the pattern, the carrier material carrying a substance to allow application of a metallic material thereto, moulding the substrate to form the article, and applying the metallic material to the seeding substance on the carrier material.

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According to another aspect of this invention there is provided a moulded article comprising a substrate and a pattern on the substrate, the pattern comprising a first layer of a carrier material, carrying a seeding substance, and a second layer of metallic material, the second layer providing  
30 electrical connections.

According to another aspect of this invention there is provided apparatus for forming a pattern on an article comprising a supply assembly for supplying a substrate, a first applicator for applying a carrier material to the substrate, the